

**PREPARED DIRECT TESTIMONY
OF
SANDRA L. ISBELL
ON BEHALF OF
CENTRAL ILLINOIS LIGHT COMPANY
DOCKET NO. 00-0724**

ILLINOIS
COMMISSION / REGISTRATION
APR 2 10 49 AM '01
CHIEF CLERK'S OFFICE

1 Q1: Please state your name and business address.

2 A1: My name is Sandra L. Isbell, and my business address is 300 Liberty Street, Peoria,
3 Illinois 61602.

4 Q2: What is your position with Central Illinois Light Company?

5 A2: I am the Fuel Analyst – Material Handling. I report to the Team Lead – Material
6 Handling Unit. My primary responsibilities in 2000 were to procure all energy-
7 producing fuels and the transportation of these fuels for CILCO's E. D. Edwards
8 Station.

9 Q3: What is your educational background and work experience?

10 A3: I am a graduate of University of Illinois - Springfield with a Bachelor of Arts degree
11 in Management. I have been part of the Fuels Department since 1985. I have held
12 positions as Traffic Administrator, Sr. Fuel Administrator, and as of July 1999, Fuel
13 Analyst.

14 Q4: Please explain the purpose and scope of your testimony in this proceeding.

15 A4: The purpose of my testimony is to describe CILCO's policy and procedures for the
16 prudent purchasing of coal and the verification of the quality and quantity of coal
17 purchased for the Company's E. D. Edwards Station, in response to the Commission's
18 Order in Docket No. 00-0724.

19 Q5: Have you prepared exhibits to which you will be referring?

20 A5: Yes, I will sponsor CILCO Exhibits 3.1 through 3.10.

21 Q6: Ms. Isbell, please describe the organization of CILCO's fuel procurement activities?

22 A6: CILCO Exhibit No. 3.1 is an organization chart illustrating CILCO's fuel
23 procurement activities. It lists the personnel and chain of responsibility at CILCO in
24 connection with the evaluation and decision-making process for all coal purchases.

25 Q7: Please describe the activities relating to the organization levels shown on Exhibit No.
26 3.1.

27 A7: The Plant Manager keeps our Group Manager informed of all-important coal-related
28 activities. The Plant Manager provides direction for fuel procurement, inventory
29 control, and related fuel activities. An outside coal contract consultant, legal firm,
30 and national accounting firm also assist in the coal negotiations, agreement drafting
31 and contract administration. Freight consultants and a Surface Transportation Board
32 consultant have also been used for consultation on rail matters.

33 Q8: Does CILCO have a written fuel procurement policy?

34 A8: Yes, Exhibit No. 3.2 is a copy of the current policy statement.

35 Q9: Does CILCO have written procedures for its fuel procurement activities?

36 A9: Yes, Exhibit No. 3.3 outlines the current procedures followed for coal purchases.

37 Q10: Does CILCO have any procedures for reviewing changes in coal prices and freight
38 rates?

39 A10: Yes. Attached, as Exhibits No. 3.4 and 3.5 are CILCO's current Coal Price
40 Adjustment Review Procedures and Freight Rate Adjustment Review Procedures.

41 Q11: Ms. Isbell, have there been any changes made to CILCO's coal procurement policy
42 and procedures?

43 A11: Yes, coal procurement policy and procedures were updated in early 2000 to reflect the
44 acquisition of CILCO by AES. These changes show the reassignment of existing fuel
45 procurement responsibilities from positions that have been renamed, consolidated or
46 eliminated.

47 Q12: Ms. Isbell, will CILCO continue to evaluate its coal procurement policy and
48 procedures in 2001?

49 A12: Yes. Many factors including implementation of customer choice and changes in
50 Company operations may require changes in the coal procurement policy and
51 procedures in 2001.

52 Q13: Ms. Isbell, are CILCO's coal procurement activities regularly audited?

53 A13: Yes, the system of internal controls for fuel procurement activities is reviewed
54 periodically as part of the annual corporate audit conducted by Deloitte & Touche
55 LLP. There are no outstanding recommended changes in CILCO's Fuel Procurement
56 Procedures from Deloitte & Touche LLP.

57 Q14: Ms. Isbell, please explain the flexibility and the general provisions that are included
58 in CILCO's coal contracts.

59 A14: Our coal contracts are currently written with the following provisions:

- 60 (1) Contract period of one to four years. When written for a longer period, a
 61 complete contract re-opener is included for every two or four year period.
- 62 (2) Annual quantities subject to adjustment.
- 63 (3) Quality price adjustments and rejection limits to ensure quality performance.
- 64 (4) Termination provisions if:
- 65 a. Coal does not perform satisfactorily during test period.
- 66 b. De-rating is caused by coal quality problems.
- 67 c. Changes occur in governmental regulations.

68 Q15: Were there any quality adjustments in 2000?

69 A15: Yes. CILCO paid a net quality adjustment of \$152,000 in 2000.

70 Q16: Ms. Isbell, what coal was purchased by CILCO in 2000?

71 A16: During 2000, we shipped coal as follows:

72	<u>Tons (000)</u>
73	E. D. Edwards Station
74	Low Sulfur Coal 30
75	Mid Sulfur Coal 1,227
76	High Sulfur Coal <u>323</u>
77	Total <u>1,580</u>

78 Q17: What coal contracts did CILCO have in effect for 2000 for E. D. Edwards Station?

79 A17: E. D. Edwards Station has three one-year term coal contracts in effect in 2000. The
 80 contracted coal suppliers were AEI Coal Sales, Consol Energy, and Exxon Coal and

81 Minerals Company. Total contracted volume represented adjustable quantities of 1.5
82 to 1.7 million tons.

83 Q18: Ms. Isbell, what procedures are followed to verify the amount of coal CILCO receives
84 from its suppliers?

85 A18: As indicated, CILCO receives coal from several different suppliers. Coal shipped
86 from these suppliers is weighed at the mine on railroad-approved scales or enroute on
87 railroad-maintained scales or on state-inspected truck scales at the mine. The railroad
88 scales are tested and calibrated on an annual basis. CILCO is permitted to be present
89 for the testing procedures and may request copies of the test reports. The weigh-in-
90 motion track scales or belt scales at the mines are also tested annually by the
91 railroads. Again, CILCO representatives are permitted to monitor the tests and
92 receive copies of the test reports. To provide additional verification of the amount of
93 coal received, incoming rail coal at CILCO's two coal-fired generating plants, Duck
94 Creek and E. D. Edwards, is weighed by belt scales, as the coal is unloaded from rail
95 cars. Coal received by barge is weighed on a truck scale at the local dock prior to
96 delivery to the plants. In 1987, CILCO began the purchasing and testing of coal
97 mined within trucking distance of E. D. Edwards plant. The truck scales at the mine
98 are tested annually and state certified. The coal is transported from the mine to the
99 plant by trucking companies retained by CILCO. Invoice weights from the mine are
100 matched against invoice weights from the truck companies and against the truck
101 weights accumulated at the plant. The quantities of coal burned are obtained at the

102 Company's two generating stations from the readings on the bunker belt scales. For
103 purposes of cross-checking, the readings from the bunker belt scales are compared
104 with the readings from scales or meters installed at the feeders to the pulverizers.
105 Final determination of coal received and coal burned is obtained, at least biannually,
106 by a physical inventory of coal in storage. The total tonnage contained within the
107 coal pile is determined through an aerial survey for volume and nuclear back-scatter
108 testing for density. Both of these services are performed by independent contractors,
109 and the results are checked by CILCO personnel. Coal on hand at the start of the
110 inventory period, plus coal received minus coal burned, should equal the coal on hand
111 at the end of the inventory period.

112 Q19: Ms. Isbell, does CILCO have written procedures for weighing coal at the plant?

113 A19: Yes. CILCO has procedures that cover the weighing and handling of coal as received
114 and as burned. These procedures are presented in Exhibit 3.6.

115 Q20: Does CILCO cause inspections to be made of the mines from which it receives coal?

116 A20: Yes. Employees from CILCO's Material Handling Unit make periodic visits to each
117 of the mines from which CILCO receives coal. During these visits, the coal sampling
118 and weighing procedures being utilized by the mines are reviewed to ensure
119 compliance with American Society of Testing and Materials (ASTM) specifications
120 set forth in the contracts.

121 Q21: How does CILCO confirm the quality of the coal it purchases?

122 A21: Coal shipments at the mines are sampled in accordance with ASTM procedures. Each
123 sample is split into three portions. One portion is analyzed by the mine or an outside
124 independent laboratory, one portion is forwarded to CILCO; and a third portion is
125 retained as a "referee" sample. The sample received by CILCO is delivered to an
126 outside independent laboratory for analysis. Should the results of CILCO's analysis
127 differ from the mine's analysis by more than 100 Btu per pound as specified by
128 ASTM procedures, the referee sample analysis can become the basis for the final
129 agreement. Each power plant is equipped with mechanical samplers that take further
130 coal samples as the coal is sent to the bunkers. Samples are taken daily of each type
131 of coal being burned within the plant, and are then analyzed. CILCO prepares a daily
132 weighted average of the Btu content of the coal burned. These averages are
133 summarized monthly, quarterly, and annually in order to monitor the heat rates
134 achieved by the steam generating units.

135 Q22: Does CILCO have written procedures for the sampling of coal?

136 A22: Yes. CILCO exercises care to take and prepare the samples in accordance with
137 procedures which ensure a representative sampling of coal. Exhibits 3.7 and 3.8
138 describe the procedures for taking and preparing the samples, procedures for analysis
139 of coal samples and procedures to be followed in analyzing coal to assure correct
140 results. Exhibits 3.9 and 3.10 describe the procedures for coal weight comparison
141 reporting and monitoring.

142 Q23: In your opinion, did CILCO act prudently in its purchases of coal for 2000?

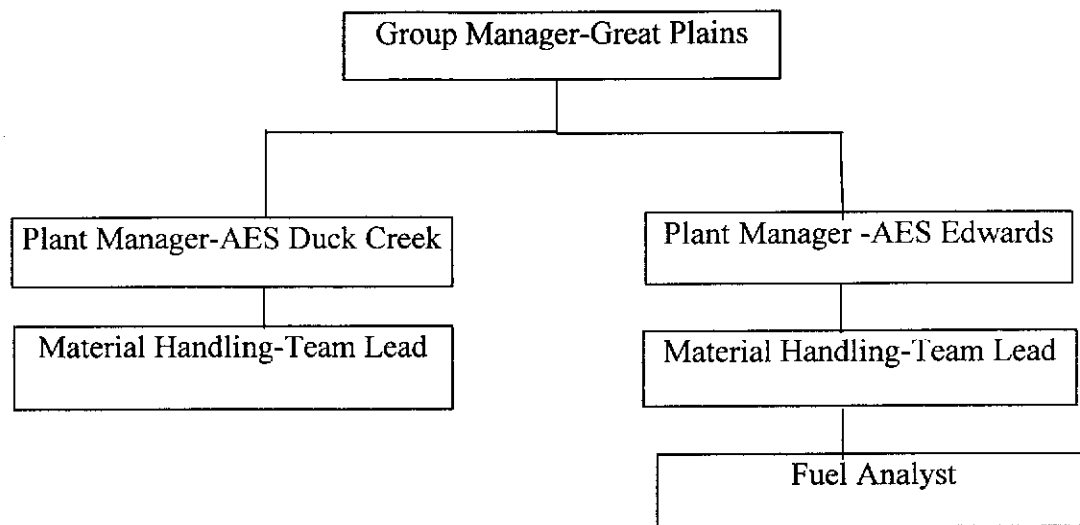
143 A23: Yes.

144 Q24: Ms. Isbell does this conclude your prepared direct testimony?

145 A24: Yes, it does.

EXHIBITS

- 3.1: Organizational Chart for Fuel Procurement Activities
- 3.2: Fuel Supply Procurement Policy
- 3.3: Coal Procurement Procedures
- 3.4: Coal Price Adjustment Review Procedures
- 3.5: Rail Freight Rate Adjustment Review Procedures
- 3.6: Coal and Limestone Weighing and Handling
- 3.7: Coal Sampling
- 3.8: Coal Sample Preparation, Analysis and Control
- 3.9: Monitoring of Coal Quality
- 3.10: Comparison of Shipping Weights



FUEL SUPPLY PROCUREMENT POLICY

1 of 1

Coal and fuel oil purchases will be in compliance with all federal and state environmental regulations.

The Company's fuel supply procurement practices are designed to ensure the lowest evaluated cost. The lowest cost concept shall be consistent with due consideration for fuel quality, specification compliance, competitive freight rate, availability, adequate reserves and ability to efficiently burn the fuel.

Whenever possible, a reasonable number of competitive bids shall be obtained for major fuel purchases. Suppliers who qualify on the basis of past performance, experience, reputation in the field, known competence, ability to maintain specifications, adequate reserves and comply with all federal, state and local laws shall be given an opportunity to present their fuel for consideration.

The Plant Manager has functional responsibility for fuel procurement with the administration and implementation of the policy, including procurement and delivery of fuels, being the responsibility of the Team Leader - Fuel, Ash and Material Handling. Legal, financial, engineering or accounting expertise required to support or enhance contract negotiations, audit or strategy planning will be obtained by and coordinated through Material Handling Unit.

Company direction and coordination of fuel activities between functional areas within the Company is the responsibility of the Group Manager.

Questions relating to the Fuel Procurement Policy should be referred to the Fuel Analyst.

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COAL PROCUREMENT PROCEDURES

1 of 6

DEFINITIONS

1. Spot Purchase Any purchase of coal that is made for immediate delivery or for periodic delivery (i.e., weekly, monthly, quarterly) for up to one year.
2. Short Term Contract Purchase Any contract purchase of coal that is made for a term of not less than one year nor more than five years.
3. Long Term Contract Purchase Any contract purchase of coal that is made for a term of more than five years.

A. SHORT TERM AND LONG TERM CONTRACT PURCHASES

Material Handling

1. Prepares list of prior and prospective suppliers who have the quality and quantity of coal required. If required, contacts mining consultant to obtain additional names of possible suppliers. Identifies suppliers who should be excluded from bidding or assigned an additional "cost factor" prior to sending inquiry.
2. Prepares and sends formal inquiry to potential suppliers, outlining CILCO's requirements and requests them to submit sealed proposal to CILCO following purchasing procedures.

Plant Accountant

3. Receives proposals and keeps secure prior to bid opening date.

COAL PROCUREMENT PROCEDURES

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Plant Accountant (cont'd.)

4. Open quotations following bid opening procedures. Retain original quotation and send copy of quotation to Material Handling for evaluation.

Material Handling

5. Performs economic evaluation of coal bids. Bid specification and historical data will be used to evaluate the bids.
6. If needed, forwards copies of bid proposals to mining and geological engineering consultants. Consultant reviews coal quality operating performance, production capability and reserves and makes an evaluation of suppliers.
7. Review quality specifications submitted by suppliers and prepares quality evaluation. Material Handling and Mining Consultant if required, should physically inspect mine(s) prior to selection of supplier(s). If possible, witness collection of coal sample from current day's production and obtain split of sample for analysis.
8. Forward copy of any new bidders coal specifications to plant personnel for review and comments relative to quality.
9. Ranks qualifying supplier(s), based on both the economic evaluation and ability to supply coal.
10. Recommends qualifying and successful bidder(s) based on the following points:
 - a. Coal quality
 - b. Reliability and capability of supplier
 - c. Monthly production and future reserves
 - d. Sampling methods
 - e. Availability and dependability of transportation from the mine
 - f. Total evaluated cost of coal delivered on a per million Btu basis

COAL PROCUREMENT PROCEDURES

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11. Enters into contract negotiations with successful bidder(s).

Suppliers who have been evaluated and with whom negotiations will be conducted may be required to submit copies of their most recent financial data.
12. Makes selection of supplier(s) based on lowest evaluated cost method.
13. Forwards copy of contract draft to mining consultant (if necessary) and legal for review and comments as required. Resolves changes with successful supplier(s).
14. Prepares finalized contract draft and submits to legal and coal consultant for final comments.
15. Prepares finalized contract, obtains supplier's approval and submits for final approval and execution, and routes purchase requisition for required approval(s).
16. Retains copy of completed signed contract and forwards original to Corporate Document file.
17. Forwards a copy of completed signed contract to legal for filing with Illinois Commerce Commission.

Plant and Material Handling

18. Monitors processing, combustion characteristics, and environmental compliance of coal during test period as specified in contract. Material Handling will also be notified should coal supply problems occur during contract term.

COAL PROCUREMENT PROCEDURES

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Material Handling

19. Inspects supplier's mining and sampling operations periodically to insure contract compliance.

B. SPOT PURCHASES

Material Handling

1. Prepares list of prior and prospective suppliers who have the quality and quantity of coal required. If required, contacts mining consultant to obtain additional names of possible suppliers. Identifies suppliers who should be excluded from bidding or assigned an additional "cost factor" prior to sending inquiry.
2. Prepares and sends formal inquiry to potential suppliers, outlining CILCO's requirements, and requests them to submit sealed proposal to CILCO following purchasing procedures.

Plant Accountant

3. Receives proposals and keeps secure prior to bid opening.
 - a. Open quotations following bid opening procedures. Retain original quotation and send copy of quotation to Material Handling for evaluation.

Material Handling

4. Performs economic evaluation of coal bids. Bid specification and historical data will be used to evaluate the bids.
5. If needed, forward copies of bid proposals to mining and geological engineering consultants. Consultant reviews coal quality operating performance, production capability and reserves and makes an evaluation of suppliers.

COAL PROCUREMENT PROCEDURES

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Or, If Time is a Constraint:

6. a. Contacts qualified suppliers by telephone, outlining CILCO's requirements and referencing a current Inquiry Number. Requests pricing, determines capability to furnish the coal as required, in accordance with CILCO specifications and any other terms and conditions. Supplier's proposal is to be confirmed in writing.
- b. Receives confirmation of verbal proposal.
7. Performs economic evaluation of coal bids received via telephone. Bid specification and historical data will be used to evaluate the bids.
8. Forward copy of any new bidders' coal specifications to plant for review and comments relative to quality, if time permits.
9. Ranks qualifying supplier(s), based on both the economic evaluation and ability to supply coal.
10. Prepares evaluation of all proposals and selects successful bidder based on the total evaluated lowest cost per million Btu delivered.
11. Inspect successful bidder's mine, if deemed necessary.
12. Prepares purchase requisition for purchase order to successful bidder specifying coal quantity, coal quality, ash characteristics and terms and conditions.
13. Routes requisition for required approval(s).
14. Retains copy of purchase order to verify contract performance.
15. Forwards a copy of purchase order to legal for filing with Illinois Commerce Commission.

COAL PROCUREMENT PROCEDURES

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Material Handling and Plant

16. Monitors processing, combustion characteristics, and environmental compliance of coal during test period as specified in contract. Material Handling will also be notified should coal supply problems occur during contract term.

C. OTHER SPOT PURCHASES

During the year there may be opportunities to purchase small quantities of spot coal from coal producers at distressed prices. If there is a need for additional spot coal, a purchase may be made without a formal inquiry being employed. Material Handling will prepare a purchase requisition specifying quantity, quality and price of the coal to be purchased and route requisition for required approval(s).

D. PROCEDURE COMPLIANCE

Whenever possible, it is intended that all coal purchases will generally be in accordance with these procedures. Alternate sources may be selected outside procedural guidelines during emergency situations, e.g., strikes, Act of God, equipment failures, or other causes, which affect the mining, delivering, and availability of the coal supply or maintenance of required inventory levels or meet burn requirements.

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COAL PRICE ADJUSTMENT REVIEW PROCEDURES

1 of 2

Definition

Price Adjustment Notification

Written request by coal supplier notifying CILCO of possible adjustment (increase or decrease) or no change in price on a regularly scheduled basis as outlined in the terms of each Coal Supply Agreement.

Responsibility

Fuel Analyst

Action

1. Receives all price adjustment notifications and reviews to assure compliance with terms of Coal Supply Agreement.

2. Contracts subject to adjustment of base components by changing cost of base components and/or indices.

- A. Reviews price adjustment notifications to verify base cost components and/or base indices.
- B. Reviews price adjustment notifications to verify current cost components and/or current indices.

Contracts subject to adjustment based on actual costs and/or changes in production.

- A. Reviews changes on all cost components and/or production for appropriate period covered by price adjustment notification.
3. Verifies accuracy of all calculations on price adjustment notifications.

COAL PRICE ADJUSTMENT REVIEW PROCEDURES

2 of 2

- | | | |
|------------------|----|---|
| | 4. | Requests review by outside consultant when an unusual or questionable item is included. |
| | 5. | Requests review by legal counsel when deemed necessary. |
| | 6. | If not in agreement with price adjustment, reviews and resolves differences with coal supplier. |
| | 7. | Approves price adjustment. |
| Fuel Analyst | 8. | Prepares monthly Fuel Cost Projection and mid-month price updates as required. Forwards copy to Plant Accounting after review by Team Leader – Material Handling. |
| Plant Accounting | 9. | Reviews invoices and verifies prices agree with monthly or updated Fuel Cost Projection. Prices not in agreement with the monthly Fuel Cost Projection are reviewed and approved by Material Handling prior to payment. |

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FREIGHT RATE ADJUSTMENT REVIEW PROCEDURES

Page 1 of 2

Definition

Rate Adjustment Notification

Adjustment of freight rates, either by written notification from carrier(s) based on change in RCAF, RCCR, or other provisions as outlined in transportation contract.

Responsibility

Fuel Analyst

Action

1. Transportation Contracts

- A. Receives all rate adjustment notifications and reviews to assure compliance with terms of Agreement.
- B. Verifies accuracy of all calculations of adjusted rate level(s) based on comparison of indices for appropriate period.

Tariffs

- A. Reviews trade publications for information relative to quarterly rate adjustment by Rail Cost Recovery Procedures.
- 2. Requests review by outside consultant and/or Surface Transportation Board specialist when deemed necessary.
- 3. If not in agreement with price adjustment, reviews and resolves difference with carrier and approves price adjustment.

FREIGHT RATE ADJUSTMENT REVIEW PROCEDURES

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Fuel Analyst

4. Prepares monthly Fuel Cost Projection and mid-month price updates as required. Forwards copy to Energy Accounting after review by the Team Leader - Material Handling.

Plant Accounting

5. Reviews invoices and verifies prices agree with monthly or updated Fuel Cost Projection. Prices not in agreement with the monthly Fuel Cost Projection are reviewed and approved by Fuel Procurement prior to payment.

Fuel Analyst

6. Retains a copy of all rate adjustment notifications and tariff supplements on file in Material Handling Unit files.

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Central Illinois Light Company

Power Generation

June 12, 1991
Revised February 5, 1998
Revised January 28, 1999

Procedure I: Coal and Limestone Weighing and Handling Procedures

Purpose:

Proper maintenance of weigh systems and careful attention to record keeping will insure that CILCO will pay only for those quantities of coal and limestone received. It will also insure that customers shall be charged only for those quantities of these commodities as are used in the production of electricity. It is imperative that the procedures as outlined are followed and that all documentation is maintained for audit by inside and/or outside auditors.

A. Unloading Report (CILCO 1391)

The Unloading Report shall be prepared by Coal Handling Operator(s) at each plant and forwarded to Energy Accounting on a daily basis whether or not coal or limestone is unloaded. A copy shall also be sent to the Fuel Supply Analyst. The following procedures shall be used:

1. Enter the date for which the Unloading Report is being prepared.
2. Check blocks indicating Station and commodity.
3. Fill in vendor's name, transportation mode and I.D number, be it train, barge or truck. Indicate number of rail cars, trucks or barges in total shipment.
4. Record time unloading was started.
5. Record time unloading was completed.

6. Visually inspect each car before unloading to check for obvious "leakers". Coal Handling Operator shall initial the form to verify that the inspection has been made.

(Cars may be inspected individually or in groups before unloading).

If an obvious "leaker" is encountered, the car shall not be unloaded until the delivering railroad has been notified and permission is obtained. Upon approval, the short car shall be unloaded; the car number and initial circled; and the weight of the coal unloaded from that car recorded in the remarks section of the report. Additionally, a "claim of loss or shortage" shall be filled in with all pertinent data and forwarded to the Senior Fuel Supply Analyst.

7. Visually check each car to assure that all of the coal or limestone has been removed. (Cars may be inspected individually or in groups).

In the comment section, enter a brief explanation for material remaining in cars along with a description of where material remains (i.e. hoppers sides) and an estimate of tons. Coal Handling Operator shall initial the comments.

If no material remains, Coal Handling Operator shall initial the form certifying that the car has been inspected and that it is empty and clean.

8. Enter beginning and ending belt scale readings.
9. Enter total coal or limestone unloaded.
10. Enter tons unloaded to bunkers.
11. Enter coal or limestone unloaded to storage. Total coal or limestone unloaded, less coal or limestone forwarded to the bunkers, equals quantity delivered to the storage or reclaim pile.
12. Enter Coal Handling Operator's name who is responsible for gathering the "as unloaded" samples.
13. The Supervisor, Fuel Handling Unit, or assigned replacement shall sign the form upon its completion and approval.

14. The Supervisor, Fuel Handling Unit, shall also make certain that necessary JR's have been written and submitted to the Station's Planners; that weather and commodity conditions are noted in the comment section; and that unusual unloading conditions or breakdowns are documented.
15. Leaving coal or limestone in the dumper hopper after cars have been released may be necessary from time to time. These car numbers shall be entered on the following days unloading report and will be treated the same as if unloaded on that date.

B. Received, Distribution and Inventory Register

The Received, Distribution and Inventory Register shall be maintained daily by each plant. One sheet shall be prepared for each supplier. Copies of the register shall be forwarded attached to fuel consumed data report to: Energy Accounting; Fuel Procurement; Energy Control Center; and Engineering Services. The following procedures shall be used:

1. Shipments: For rail shipments, record train number, number of cars, and weight, if known, on the date shipment is placed on plant tracks. For truck shipments, record the number of trucks and collect scale tickets for each days delivery.
2. Unloaded - Belt Scale: Enter number of cars unloaded from unloading report for one particular vendor's commodity.
3. Difference: Subtract unloaded from shipments column and record difference.
4. Unloaded to: Record tons distributed to bunkers and storage. The totals of these columns must equal quantities unloaded.
5. Storage to Bunker: Record tonnage delivered to the bunkers from storage.
6. Total to Bunker: Add quantities unloaded to bunker to quantities delivered to bunker from storage.
7. Transfer Tons to: This column is to be used when coal or limestone is transferred from one station to another.
8. Total Tons on Hand: This column is subject to correction by Energy Accounting. Add tons unloaded to the previous date's total, less tons to the bunkers, to equal tons on hand.

C. Fuel Consumed Data Report

The Fuel Consumed Data Report shall be completed by each plant and forwarded no later than the fifth working day after the first of the month. The report shall be attached to the received, distribution and inventory register(s) and forwarded to: Energy Accounting, Fuel Procurement Unit, Energy Control Center, and Energy Services. The following procedures shall be used:

1. Feeder Scales/Meters: These scales shall be used to verify distribution of the total station tonnage burned. Feeder readings shall be compared to belt scale readings adjusted for bunker swing. Reliance for total station and unit burn tonnage shall be placed primarily on the belt scales. The feeder scale readings will be used for this purpose only if belt scales are malfunctioning or out of service for repairs. The feeder scales are a valuable monitoring tool providing a backup and a basis of comparison to the belt scales.
2. Belt Scales – Bunkers: Record total of belt scale readings at start of period and end of period. Materials tests are to be included in the totals.
3. Adjustments – Plus or Minus: Any adjustment made to the tonnage integrated by the coal scales must be documented.
4. Bunker – First of Period: Record tons on hand at midnight of last day of period.
5. Bunker – First of Period: Record tons on hand at start of period.
6. Bunker Difference – Plus or Minus: Record difference of bunkers: Start of Period minus End of Period.
7. Total Coal Burned: Record difference of tons integrated by the coal scales, plus or minus adjustments, plus or minus bunker swing. This equals total coal burned.
8. Fuel Oil Inventory: Record quantity on hand at start of period. Quantity received, less quantity used, equals quantity on hand at the end of the period.
9. Coal Burned: Enter quantities of each vendor's coal. The total should equal the adjusted belt scales.
10. Fuel Oil Burned: Record gallons of fuel oil burned.
11. Gas Burned: Record MCF of gas burned.

D. Verification of Unloaded Weights to Shipped Weights:
Duck Creek Station

1. Unload belt scale weights shall be compared to shipped rail scale weights by the Fuel Supply Analyst.
2. If the weights vary more than 1% in the unload comparison, an explanation of the variance shall appear in the comment section.
3. If the cause of the variance is undetermined, an electronic calibration check shall be requested by Fuel Supply Analyst on the unload scale if the variance is greater than 1% for three consecutive unloads or if the monthly average variance is greater than 1%. Plant response shall be within ten working days.
4. If the variance persists after unload scale calibration, a rail scale calibration check shall be requested by either the Senior Fuel Supply Analyst or Fuel Supply Analyst.
5. If either weigh system is found in error, corrective action shall be taken within thirty days. Mechanical or electronic adjustments shall be made to the weigh system found in error, and material tests shall be conducted to verify system performance.

E. Verification of Unloaded Weights to Shipped Weights:
E. D. Edwards Station

The verification procedure for Edwards Station shall be the same as Duck Creek with the following exception. The allowable variance tolerance for E. D. Edwards Station shall be 3% instead of 1% for the following reasons:

1. E. D. Edwards receives coal from multiple suppliers using multiple carriers. This increases the probability for error.
2. E. D. Edwards can receive coal via multiple transportation modes (rail, truck, barge) with multiple transfer points. This increases the probability for error.
3. E. D. Edwards unit trains can be in transit for up to seven days increasing weather effects on product weight.
4. E. D. Edwards unit trains, unlike Duck Creek, are not composed of the same series of rail cars. This increases the probability of weight discrepancies.

F. Verification of Unloaded to Bunkered Weights:
Duck Creek Station

A portion of each train shall be run directly to the plant's bunkers or limestone silo if possible. The weight indicated by the unloading scale shall then be compared to the bunker belt scale, or limestone silo scale. All start and stop readings shall be recorded either on the "unloading report" or appropriate unloading log. Should a trend of differences greater than 1% become evident, the following action shall be taken to define and eliminate the problem.

1. Note on unload report, circumstances that may have caused the variance (weather, mechanical problems, etc.)
2. Make certain scale area is clean and that no material is lodged in scale's clearance areas.
3. Request that scale calibrations be checked on both weigh systems by the Instrument and Chemical Maintenance Unit. Response shall be within ten working days.
4. If problem persists, notify Fuel Supply Analyst. Inspection and testing of conveyor scales may be required.

G. Verification of Unloaded to Bunkered Weights:
E. D. Edwards Station

The verification procedure for Edwards Station shall be the same as Duck Creek with the following exception: The allowable variance tolerance for E. D. Edwards shall be 3% instead of 1% for the following reasons.

1. E. D. Edwards blends coals before bunkering and hence does not run unloaded coal direct to the bunkers routinely.
2. Consequently 2-car tests rather than 10-car tests are run for weigh system verification. With minimal tonnage, the effects of coal picked up and/or lost at transfer points in the conveyor system have a disproportionate impact on the weight variance.

H. Verification of Bunker to Feeder Weights:
Duck Creek Station

1. Monthly bunker belt scale weights shall be compared to feeder readings by the Engineering Services Performance Engineer.
2. If the integrated monthly totals vary more than 1%, an explanation of the variance shall appear on the heat rate estimate form submitted monthly to the Plant Facility Coordinator.
3. If the cause of the variance is undetermined and exceeds the 1% tolerance limit for two consecutive months, a calibration check of the weigh systems in questions shall be requested by Engineering Services Performance Engineer. Plant response shall be within ten working days.

I. Verification of Bunker to Feeder Weights:
E. D. Edwards Station

The verification procedure for Edwards shall be the same as Duck Creek with the following exception. The allowable variance tolerance for E. D. Edwards Station shall be 3% instead of 1% for the following reasons:

1. E. D. Edwards coal from the bunker belts is distributed across the tripper floor to three generating units through thirteen feeders. This multiple distributive function increases the probability for error.
2. E. D. Edwards fuels the plant on two shifts. This multiple fueling scenario increases the probability for error.

J. Belt Scale Calibration

1. Unload Belt Scales: Total system inspection, electronic and material calibration shall be on a semi-annual basis performed under the supervision of the Fuel Supply Analyst and Engineering Services Performance Engineer with support from Plant Operations and Maintenance, and an independent scale technician/engineer.
 - a. Semi-annual scale tests shall be performed to NIST Handbook 44 tolerance and repeatability specifications.

- b. Plant personnel shall run electronic calibration and record results monthly between material tests. Span changes shall be reported to the Engineering Services Performance Engineer. If more than one span adjustment is required between routine semi-annual testing periods, material tests shall be scheduled within thirty days, weather permitting.
 - c. Should the results of the monthly calibration checks indicate a problem with the weigh systems, procedures D through I of this section shall go into effect.
- 2. Bunker Belt Scales: The same calibration procedures used for unload scales shall apply to bunker scales.
 - 3. Reclaim Belt Scales: The same calibration procedures used for unload scales shall apply to bunker scales.
 - 4. Feeders: Feeders shall be calibrated monthly by plant personnel.
 - 5. Records: All scale material test data shall be forwarded to the power plants within ten days of testing. All electronic records shall be forwarded to Engineering Services for documentation and development of historic and graphic representation and trend analysis within ten working days of calibration check.

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Procedure II: Coal Sampling Procedures
Mechanical and Manual Coal Sampling and Handling

Purpose:

Sampling in accordance with the following procedures, insures that the "as burned" and "as unloaded" coal quality is representative of the received, reclaimed, or blended product. It is, therefore, absolutely imperative that every effort be made to take the samples as outlined, and to protect them from changes in moisture or other degradation. All samples shall be delivered to the sample collection point on the shift that the sample is taken – but no later than the next working day after train, truck, or barge is completely unloaded, or bunkers are filled.

A. Unload Samples: Duck Creek Station

Since Duck Creek utilizes the mechanical sampling system to secure a single sample for unload and burn, burn sample tons are used to represent unload sample tons. This unload sample does not meet ASTM Standards as outlined in D2234-76. A partial representative sample shall be obtained with the following methods:

1. Portion of every shipment received shall be run to the bunkers if possible. The automatic sampler shall be cleared and a fresh plastic bag positioned to receive the sample of that coal. The bag shall be tagged with CILCO tag #2223. Sample shall be double bagged with the label attached to the outer bag. Sample extractions shall conform to minimum ASTM D-2234-76 or ASTM D-2013-76 standards, but contain not less than five pounds.

2. If shipped coal is not run to bunkers, the shipment shall be sampled by taking "grab" samples from the first car unloaded and every tenth car thereafter. The grab sample shall be taken by inserting the collection vessel directly into a moving stream of coal, placing the coal into a plastic bag, and sealing the bag. Each bag shall be labeled with: date sampled, train number and mine name. All individual bags from a single shipment shall be placed in a large plastic bag, sealed, tagged with CILCO tag #2223 and labeled "as unloaded". Each car increment sample shall be three to five pounds.
3. Truck shipments shall also be "grab" sampled each day. The first truck and every fifth truck, thereafter, shall be sampled. Each bag shall be marked with: date sampled and mine name. Individual bags shall be placed in a large plastic bag, sealed, tagged with CILCO tag #2223, and labeled truck shipment "as unloaded". Each truck increment sample shall be three to five pounds.

B. Unload Samples: E. D. Edwards Station

The normal practice of blending coals of different sulfur content by use of reclaim feeders minimizes direct unloading to bunkers and allows limited use of the mechanical sampling system to collect unload samples of incoming shipments as outlined in ASTM Standard D2234. When the mechanical sampling system cannot be used, a representative sample shall be obtained with the following methods:

1. For all rail shipments, representative "grab" samples shall be taken from the first car unloaded and every tenth car thereafter. The grab sample shall be taken by inserting the collection vessel into a moving stream of coal, placing the coal into a plastic bag, and sealing the bag. Each bag shall be labeled with: date sampled, train number, and mine name. All individual bags from a single shipment shall be placed in a large plastic bag, sealed and tagged with CILCO tag #2223. Each car increment sample shall be three to five pounds.
2. Should blending not occur during the unloading of a rail shipment, a portion of the shipment should be run directly to the bunker and the mechanical sampling system used to sample this portion. The balance of shipment sampling shall be performed and labeled as described in Part B1. The auto sampled portion shall be labeled accordingly. Sample shall be composited, tagged and labeled as in B1.

3. Truck shipments direct from the mine or from barge unloading facilities shall also be "grab" sampled each day.
 - a. For direct mine shipments, the first truck and every fifth truck, thereafter, shall be sampled. Each bag shall be marked with date sampled and mine name. Individual bags shall be placed in a large plastic bag, sealed, tagged with CILCO tag #2223 and labeled with source of trucked coal. Each truck increment sample shall be three to five pounds.
 - b. For each barge unloaded, the first truck and every fifth truck thereafter, shall be sampled using the same method as outlined in "3a" above. Each truck sample is to be sealed in a plastic bag and labeled with the date sampled, mine name, barge line and barge number. Individual bags shall be placed in a large plastic bag, sealed, tagged with CILCO tag #2223 and labeled with barge identification. Each truck increment sample shall be three to five pounds.

C. Burn Samples: Duck Creek Station

It is extremely important that a representative sample of each days burn be collected, properly sealed to protect the integrity of the sample, and properly labeled to insure correct correlation to analysis. These analysis coupled with the "as burned" weights determine the station and unit heat rates. Care should be taken in performing this sampling function to prevent any distortion of heat rates. The following procedures shall be followed in collecting "as burned" samples:

1. When fueling the plant directly from a rail shipment, follow procedure A1 in this section.
2. Every effort shall be made to sample all of the coal hoisted to the bunker each day by use of the mechanical sampling system in accordance with ASTM D2234. If it becomes necessary to stop fueling the plant for an abnormal period of time during the day's hoist, the sample bag shall be sealed, double-bagged, and tagged at the time of shutdown. As soon as fueling is resumed and moisture equilibrium established within the mechanical sampling system, a second bag shall be attached to the final save connection of the system for collection of the second portion of daily burn sample. Immediately after fueling is completed for the day, the sample bag shall be sealed, double-bagged, and tagged with CILCO tag #2223. Sample extractions shall conform to minimum ASTM D-2234-76 or ASTM D-2013-76 standards but contain no less than five pounds.

3. When the mechanical sampling system is inoperative, the following procedure shall be used. As soon as it becomes known that the mechanical sampling system is inoperative, a representative "grab" sample shall be taken on an hourly basis while hoisting to the bunkers. The sample shall be collected by inserting the collection vessel into a moving stream and each increment sealed in a plastic bag. Individual bags shall be placed into a large plastic bag, sealed, and labeled in accordance with Section C2 above. Each increment shall be three to five pounds.
4. The mechanical sampling system shall be inspected and adjusted as needed by a qualified service engineer on an annual basis. This inspection shall include recommendations for corrective action and follow-up of action taken.

D. Burned Samples: E. D. Edwards Station

E. D. Edwards Station blends coals of different sulfur content for the daily burn. The plant is fueled on two separate shifts. It is imperative that the correct tonnage of each type of coal be identified for inventory control purposes and the tons hoisted and tons sampled be recorded for each shift.

Representative samples of each shift's burn shall be collected, properly sealed to protect the integrity of the sample, and properly labeled to insure correct correlation to analysis. The composite analysis of the two shift samples will be used as the daily burn analysis for the determination of station and unit heat rates.

Care should be taken in performing this sampling function to prevent any distortion of heat rates. The following procedures shall be followed in collecting "as burned samples":

1. Every effort shall be made to sample all of the coal hoisted to the bunker each day by use of the mechanical sampling system in accordance with ASTM D2234. During change of shifts or if it becomes necessary to stop fueling the plant for an abnormal period of time during the day's or shift's hoist, the sample bag shall be sealed, double-bagged, and labeled at the time of shutdown. As soon as fueling is resumed and moisture equilibrium established within the mechanical sampling system, a second bag shall be attached to the final save connection of the system for collection of the second portion of the shift or daily burn sample. Immediately after fueling is completed for any one shift or period, the sample bag shall be sealed, double-bagged, and tagged with CILCO tag #2223 and identified by shift. Sample extractions shall conform to minimum ASTM D-2234-76 or ASTM D-2013-76 standards, but contain no less than five pounds.

2. When the mechanical sampling system is inoperative, the following procedure shall be used. As soon as it becomes known that the mechanical sampling system is inoperative, a representative "grab" sample shall be taken on an hourly basis while hoisting to the bunkers. The sample shall be collected by inserting the collection vessel into a moving stream and each increment sealed in a plastic bag. Individual bags shall be placed into a large plastic bag, sealed, and labeled in accordance with Section D1 above. Each increment shall be three to five pounds.
3. The mechanical sampling system shall be inspected and adjusted as needed by a qualified service engineer on an annual basis. This inspection shall include recommendations for corrective action and follow-up of action taken.

E. Disposition of Collected Samples

1. Duck Creek Station

All samples collected under these procedures shall be taken to the storeroom at Duck Creek Station for shipment to independent laboratories for further processing, unless otherwise directed by the Fuel Supply Analyst.

2. E. D. Edwards Station

All samples collected under these procedures shall be taken to the storeroom at E. D. Edwards Station for shipment to independent laboratories for further processing, unless otherwise directed by the Fuel Supply Analyst.

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Procedure III: Sample Preparation and Analysis Procedure
Selection and Use of Independent Laboratories for Coal Sample
Preparation and Analysis

Purpose

The analyses of the prepared samples handled under this procedure are used for coal contract administration, calculation of station and unit heat rates, fuel adjustment clause reporting, comparison to mine samples and moisture corrections to physical inventory adjustments.

A. Laboratory Selection

Due to the significance of results as outlined above, it is imperative that the laboratories selected maintain high standards of professionalism and integrity and that results be defensible and creditable for all intended uses. In order to maintain checks and balances in monitoring mine shipment splits, shipment unload analysis, and burn sample analysis, it is necessary to keep a minimum of three independent laboratories under contract.

These laboratories shall be solicited by sealed bids using Purchasing Department procedures. Bid evaluation shall be by the following criteria in addition to economical evaluation:

1. Laboratories selected shall adhere to ASTM Standards and Procedures as outlined in Section 5: Petroleum Products, Lubricants, and Fossil Fuels, and specifically Volume 05:05: Gaseous Fuels; Coal and Coke. This is a minimum standard to meet contract administration requirements.
2. Laboratories selected shall have an in-house quality control program, preferable more stringent than ASTM limits and tolerances.
3. Laboratories selected shall have analytical experience in the types of coals purchased and burned by CILCO.

4. Laboratories selected shall be timely in delivery of results to meet reporting deadlines.
5. Laboratories selected shall maintain professional standing in ASTM, ISO or other laboratory accreditation organizations.

B. Sample Distribution to Laboratories Under Contract

1. Samples shall be analyzed using a spectrum of analytical scenarios: short proximate, proximate, ultimate, mineral analysis of ash, fusion temperatures, hardgrove grindability equilibrium moisture, screen analysis, and analysis for health hazard chemicals.
2. Typical materials sent for analysis are: coal, oil, ash and limestone.
3. Typical coal samples sent for analysis are: burn, unload, burn/unload, mine splits, mill rejects, feeder coal for performance testing, and bidders' qualification samples.
4. Selecting from the laboratories under contract, samples shall be sent to the particular lab that can satisfy the need for maintaining checks and balances, and obtaining a broad data base for verification of results. Data from multiple analyses shall be used to identify and resolve contract disputes, laboratory QA/QC questions, plant equipment or handling problems, and/or heat rate discrepancies.
5. Shipping memos including sample identification numbers will be used to verify sample-to-analysis correlation.

C. Laboratory Inspections

Each laboratory shall be inspected on an annual basis by Fuel Procurement to insure that quality of service is being maintained by the laboratories. When monthly averages vary beyond ASTM tolerances for two consecutive months or if laboratory bias is suspected based on comparisons, a laboratory inspection will be conducted within thirty days.

D. Verification and Distribution of Coal Analysis Results

1. Original copies of analyses shall be reviewed by the Senior Fuel Procurement Analyst and copies sent to the Fuel Supply Analyst for review including a check for errors and adherence to ASTM tolerances.
2. Following this review, results shall be prepared for entry into various coal quality data bases and for general distribution to other areas of the company.
3. If results are questionable or exceed acceptable ASTM tolerances as outlined in Section 5: Volume 05.05, the Fuel Procurement Unit shall request reanalysis on the portion of the sample held for this purpose.
4. Laboratories selected shall be monitored by Fuel Procurement through lab evaluations, comparison, and audits. Findings shall be used in the laboratory selection process.

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Procedure: Monitoring of Coal Quality

Issued: June 1, 1980 (Revised October 9, 1984;
Reviewed April 29, 1987; Revised February 5, 1998)

Effective: Until Further Notice

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Although several persons will examine the individual analysis, it shall be the responsibility of the Fuel Procurement group:

1. To report monthly weighted average of mine sample quality and coal costs.
2. To report monthly weighted average of comparison of plant as received samples versus mine samples; including tonnage.
3. To maintain a daily check on coal quality and recommend the use of an outside laboratory for sampling and special tests of coal quality should plant as received samples differ from mine samples.

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Power Generation

Procedure: Comparison of Coal and Limestone Shipping Weights vs.
Plant Unload Belt Scales

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Revised January 28, 1999)

Effective: Until Further Notice

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I. Purpose

Comparison of the Plant's unload belt scale weights to the shipping weights provides primary assurance that the material received approximates quantities invoiced. Fuel Procurement Management and the Station(s) will be advised of major differences or developing trends between belt scale weights and shipping weights as soon as the information is available.

II. Responsibility for the Comparison

The Fuel Procurement Unit will make the comparison.

III. Comparison Procedure

1. Rail shipments with individual car weights invoiced. Actual weights shall be accumulated for each car as listed on the Daily Unloading Report (CILCO 1391). The total of the cars unloaded will then be logged and differences between the plant unload scales and invoiced weights will be listed both in tons and percentage of difference. Major differences or trends shall be reported to the Plant's Facility Coordinator.

2. Rail Shipments with Only Total Net Tons Invoiced: The total tons invoiced shall be divided by the number of cars shipped. The average weight of each car unloaded shall then be accumulated and compared to the scale weight as shown on the Unloading Report. Major differences or trends will be reported to the Plant's Facility Coordinator.
3. Barge Shipments: Commodities received by barge do not pass station unloading scales, instead the material is trucked directly to the storage pile. Delivering truck tickets shall be accumulated for each barge and the total shall be compared on the "Received, Distribution and Inventory Register" as prepared by each station.

IV. Comparison Report

A monthly comparison report shall be prepared by the Fuel Supply Analyst and forwarded to:

Energy Accounting
Duck Creek Station Management
E. D. Edwards Station Management
Fuel Procurement Management
Engineering Services

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C. Gilson

Date: January 28, 1999